

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A process for producing fibrous monolith components comprising:

combining a first ceramic powder with a thermoplastic polymer binder and a ~~thermoplastic plasticizer~~ one or more processing aids to create a first uniformly suspended mixture, ~~the uniformly suspended mixture comprising 50 to 62 volume percent of the ceramic powder, 37 to 50 volume percent of the thermoplastic polymer binder, and 0 to 12 volume percent of the thermoplastic plasticizer;~~

combining a second ceramic powder with a thermoplastic polymer binder and one or more processing aids to create a second uniformly suspended mixture;

~~warm pressing~~ forming the first and second uniformly suspended mixture mixtures into a composite feed rod including a central portion of the first uniformly suspended mixture and an outer portion of the second uniformly suspended mixture essentially surrounding the central portion;

extruding the composite feed rod ~~with a computer numerically controlled extruder to produce a~~ an extruded fibrous monolith filament and forming a fibrous monolith preform from the filament;

~~placing~~ heating the preform in a binder burnout furnace to remove to a first temperature effective for removing the thermoplastic polymer binder; and

~~placing the perform in a pressureless sintering furnace~~ heating the preform to a second temperature effective to consolidate and densify the preform at a pressure of no more than about 30 psi to provide a sintered fibrous monolith component.

2. (Currently amended) The method of Claim 1 wherein at least one of the first or second uniformly suspended mixture mixtures contains a sintering aid.

3. (Currently amended) A process for consolidation and densification of fibrous monolith components comprising:

placing a preformed fibrous monolith composite formed of one or more filaments having a central portion of a first uniformly suspended mixture and an outer portion of a second uniformly suspended mixture essentially surrounding the central portion, wherein the second uniformly suspended mixture forms essentially a continuous phase in the composite, in a sintering furnace, the sintering furnace containing an inert gas or nitrogen gas; and ~~having a pressure in the range of 1 to 30 Psi.~~

~~applying energy to~~ heating the fibrous monolith composite at a pressure of no more than about 30 psi at a temperature effective to achieve full density of the first and second uniformly suspended mixtures and provide a sintered fibrous monolith composite.

4. (Original) The process of Claim 3 wherein the fibrous monolith composite comprises  $\text{Si}_3\text{N}_4$ , BN, and a sintering aid.

5. (Original) The process of Claim 3 wherein the fibrous monolith composite comprises ZrC and WRe and is heated to at least 2000 Celsius.

6. (Currently amended) A method for manufacture of an article comprised of a fibrous monolithic material comprising the steps of:

- a) forming a fibrous monolithic material in the form of a filament and including a first material composition generally surrounded by a second material composition;
  - b) compressing the filament to consolidate the material and densify the first and second material compositions;
  - c) forming the compressed filament into a preform of the article; and
  - d) sintering the preform in an inert atmosphere at generally atmospheric pressure at a temperature effective for providing an essentially fully dense, sintered article.
7. (New) The process of Claim 1 wherein the second temperature is less than the lowest melting point of the first and second ceramic powders.
8. (New) The process of Claim 1 wherein the one or more processing aids includes a plasticizer.
9. (New) The process of Claim 2 wherein in the sintering aid is selected from the group consisting of yttrium oxide, aluminum oxide, silicon carbide, zirconium metal and hafnium hydride.
10. (New) The process of Claim 1 wherein the fibrous monolith composite is heated at about atmospheric pressure.
11. (New) The method of Claim 1 wherein in the step of heating the preform to the second temperature the preform is initially heated to an interim temperature and held for a period of time before heating to the second temperature.
12. (New) The process of Claim 3 wherein the fibrous monolith composite is sintered at a temperature below the lowest melting temperature of the first and second uniformly suspended mixtures.

13. (New) The process of Claim 3 wherein the fibrous monolith composite is sintered at a temperature below at least one of the melting temperatures of the first and second uniformly suspended mixtures.

14. (New) The method of Claim 3 wherein in the step of heating the fibrous monolith composite the fibrous monolith composite is initially heated to at least one interim temperature and held for a period of time before heating to the temperature effective for achieving full density.

15. (New) The method of Claim 6 wherein the preform is sintered at a temperature below a lowest melting temperatures of the first and second material compositions.

16. (New) The method of Claim 6 wherein the preform is sintered at a temperature lower than a melting temperature of at least one of the first and second material compositions.

17. (New) The method of Claim 6 wherein during sintering the pressure is no more than about 30 psi.

18. (New) The method of Claim 6 wherein in the step of sintering the fibrous monolith composite the fibrous monolith composite is heated at a controlled rate to at least one interim temperature and held for a period of time.